Oil Field Environmental Incident Summary

Incident: 20160719131502 **Date/Time of Notice:** 07/19/2016 13:15

Responsible Party: DENBURY ONSHORE, LLC

Well Operator: DENBURY ONSHORE, LLC

Well Name: FRANKS CREEK STATE 1-23 H

Field Name: T. R. **Well File #:** 6551

Date Incident: **7/18/2016** **Time Incident:** 14:30 **Facility ID Number:**

County: BILLINGS **Twp:** 141 **Rng:** 101 **Sec:** 23 **Qtr:**

Location Description: 2 ft by 100 ft along a drainage 50 ft east of location. And 2 ft by 100 ft down the hill on south side of location.

Submitted By: Mark VanGrinsven **Received By:**

Contact Person: Mark VanGrinsven
5320 LEGACY DR
PLANO, TX 75024-3127

General Land Use: Badlands Terrain **Affected Medium:** Topsoil

Distance Nearest Occupied Building: 2 Mile

Distance Nearest Water Well: 2 Mile

Type of Incident: Other

Release Contained in Dike: No **Reported to NRC:** No

	Spilled	Units	Recovered	Units	Followup	Units
Oil	**2**	**Barrels**				
Brine						
Other						

Description of Other Released Contaminant:

Inspected: **Written Report Received:** **Clean Up Concluded:**

Risk Evaluation:
None

Areal Extent:
2 ft by 100 ft and another 2 ft by 100 ft east and south of location

Potential Environmental Impacts:

None

Action Taken or Planned:

The well has been shut-in and the oil tanks have been emptied. The flowline and discharge line will be pressure tested. Containment berms have been erected at the bottom of the two impacted ravines. Absorbent booms and pads have been placed on the impacted soils. Impacted soils with be flushed with fresh water and recovered via vacuum truck.

Wastes Disposal Location:

Agencies Involved:

Updates

Date: 7/19/2016 ***Status:*** Reviewed - Follow-up Required ***Author:*** Crowdus, Kory

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Release impacted areas off location. Follow-up is required.

Date: 7/25/2016 ***Status:*** Inspection ***Author:*** Souder, Taylor

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on site at 1300 MT. Spoke with a few Denbury employees who were putting in a new flow line; the release is off the side of the hill near the flare. There is a large amount of oil staining that runs down the badland hill until it reaches the bottom. Denbury has put down some oil-absorbing pads and has built an earthen berm around the bottom portion of the release. The employees I talked to did not know what the plan was for cleanup. Further follow-up needed. Photos can be found in the report folder.

Date: 7/29/2016 ***Status:*** Correspondence ***Author:*** Suess, Bill

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

I spoke with Rick Hutchins at NDIC. Rick indicated that the release is due to a leaking flow line. Oil is leaking out of the side of the well pad through the scoria. The total volume is unknown but more than the two (2) barrels originally reported. NDIC is meeting with the RP today to address the situation and stop the oil from seeping. Rick will email NDDoH with an update. More follow-up from NDDoH is needed.

Date: 7/29/2016 ***Status:*** Inspection ***Author:*** Souder, Taylor

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on pad at 1000 MT. Met with employees of Denbury and with the NDIC. Received update that release is still coming up from the ground and that Denbury has been trying to soak up the extra oil. We met to discuss the next plan of attack and roughly sketched out the remediation processes that would be suitable for this release. A work plan will be written up by Denbury and sent to NDDoH.

Date: 8/3/2016 ***Status:*** Inspection ***Author:*** O'Gorman, Brian

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Arrived on location at 18:00. 82 degrees F, sunny, west wind 15-25 mph. Observed the site and took photos. It appeared that a new flow line had been installed from the wellhead to the heater/treater and partially filled back in with clean soil. Petroleum-stained soils and vegetation were noted along the south side of the well pad that had daylighted approximately 15 feet below the well pad surface. The oil appeared to move down-gradient approximately 250 feet in a 5- to 15-foot wide channel. Two other locations were noted on the south-facing slope approximately 50 feet below the well pad surface that had oil daylighting. Walked to the southwest toward a stock dam and did not notice any oil staining or sheen in a small erosional channel that fed the stock dam. Photos added to report folder. More follow-up needed.

Date: 8/8/2016 ***Status:*** Correspondence ***Author:*** O'Gorman, Brian

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Received an email from Cody Vanderbusch that showed test hole locations for the well pad surface and explained when Denbury was to submit a plan for the cleanup. The email also states that Denbury is using a vac truck twice daily to remove oil/water from the holes. Email and attachment added to folder.

Date: 8/10/2016 ***Status:*** Correspondence ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Received current status report and proposed drilling locations. Drilling planned for tomorrow.

Date: 8/11/2016 ***Status:*** Inspection ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

8/11/2016 at 11:30, on location. Met with responsible party personnel, drilling team, and consultant. Four holes already bored today on the north side of the wellpad, with the fourth located at the northwest corner (#9 on map) collapsing due to cave-ins. Decision was made to abandon the hole due to instability and no evidence of contamination at a depth of 9 feet. Previous three holes were mostly clean with one having a 1-inch stained layer. General stratigraphy from these borings shows a layer of scoria at the top down to a depth of 12-15 feet, with the next few feet being a gradation between scoria and clay before progressing to tight clays. Witnessed next holes bored (#10 and #11) located on the northeast side of the wellpad, with no evidence of contamination, although hole #10 also had to be abandoned due to cave-in at a depth of 9 feet. Walked perimeter of site in a clockwise manner while drilling crew took a break and repositioned equipment. Contamination on east side has seeped out roughly where the drainage exposure shows a few feet of clay below scoria. Unable to determine stratigraphy below this clay in the drainage due to oil staining. Staining follows drainage down to the bottom of the slope, where absorbent booms have been set up to contain and absorb any free product. However, recent rainfalls have started eroding the containment, with some stained sediment going over the top of the booms. Continuing walk around the site to the southeast, staining noted by responsible party in previous reports is still visible coming out the side of the hill in a few spots, with most appearing to come out at the scoria/clay transition zone. Some spots are lower; these appear to correlate with a lignite/coal layer within the clay layer. The drainage coming from the south side of the wellpad is well bermed with a plastic liner to resist any erosion and to catch any free product. No evidence that impacted soils are escaping this containment here. Further to the southwest, there are a few spots of staining in the same scoria/clay transition zone, but the entire zone is not stained. Lower in the clay from the staining, a well-developed gypsum layer with some 1/2-inch crystals is visible, but the lignite layer is not visible on the surface here. Walked back up to drilling site and informed responsible party of findings and the need to construct a better containment/berm for east side drainage, especially before any heavy rains hit the site. Witnessed drilling of holes #12 and #13 on the east and southeast side of the wellpad. Both holes encountered contamination, with an odor noted a few feet before actual free product was found. Saturation depth for the holes were 14 feet and 16 feet, respectively. The last hole of the day, #14, was drilled at the southwest corner of the wellpad. No petroleum odor or staining was detected, although the clays below the scoria were wet. If this hole fills up with enough water, it will be sampled and tested for chlorides to determine if it is rainwater or production water. Further drilling on the wellpad is planned in the future to better determine extent of on-location impact. Consultant will keep the NDDoH informed of findings, and responsible party will report fluid levels removed from borings to both the NDDoH and the NDIC.

Date: 8/18/2016 ***Status:*** Correspondence ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Have received daily reports of fluid recovered from boreholes. To date, 818.75 total bbl of fluid (both water and oil) have been removed from the site.

Date: 8/29/2016 ***Status:*** Correspondence ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Have received daily reports of fluid recovered from boreholes. By the end of last week, 901 total barrels of fluid (both water and oil) had been removed from the site. Received remedial workplan on this date.

Date: 9/6/2016 ***Status:*** Correspondence ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Phone call with new operator for site. New total for fluids removed (as of 9/2/2016) is 1023.5 barrels (includes water and oil).

Date: 9/19/2016 ***Status:*** Correspondence ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Received email with update from site on 9/15/2016. Total fluid removed from site as of 9/12/2016 listed as 1,124.75 barrels (401.75 bbl water, 723 bbl oil). Recovered fluid is being processed and stored at an idle well. Once enough water is recovered, it will be used in a field injection or disposal well. Oil will be sent to a midstream company for use. Pressure testing of water lines planned. New operator has taken over all cleanup duties, and company's own consultant will be replacing Denbury's consultant.

Date: 11/4/2016 ***Status:*** Inspection ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

11/1/2016, on location. East side seep now has clay berm directly behind absorbent pad berm that was breaking down. Seeps do not appear to be growing. More follow-up required as reclamation proceeds.

Date: 11/10/2016 ***Status:*** Correspondence ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Email response from new operator on site progress. Currently getting contractor to clean and case recovery holes for winter. Order for thermal imaging of the site has been placed.

Date: 12/5/2016 ***Status:*** Correspondence ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Phone call with operations engineer for area. Due to recent winter weather, casing of holes has been delayed, as well as hydrovac excavating along existing lines to further delineate any potential spill pathways. Weather dependant, work will occur in the next few weeks. Department requested updated volume on amounts removed from the recovery holes.

Date: 12/8/2016 ***Status:*** Correspondence ***Author:*** Martin, Russell

Updated Oil Volume:

Updated Salt Water Volume:

Updated Other Volume:

Updated Other Contaminant

Notes:

Received updated spreadsheet with current recovery totals as of 12/1/2016. Current total volume removed for the entire incident are 902.75 barrels of water, and 1185.25 barrels of oil, with the majority of oil (1069.25 barrels) coming from only one of the recovery holes. According to operations engineer, work to case holes should begin Monday (12/12/2016).